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22801	7590	10/29/2007	EXAMINER	
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			JAKOVAC, RYAN J	
			ART UNIT	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/784,146

Applicant(s)

NOG ET AL.

Examiner

Ryan J. Jakovac

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/01/2004.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

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### **DETAILED ACTION**

This action is responsive to communications filed on 02/20/2004.

Claims 1-38 are pending.

Claims 1-38 are rejected.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 25-38 are rejected under 35 U.S.C. 101. The claimed invention is directed to non-statutory subject matter. Claims 25-38 are directed to a computer program product which in paragraph [0008] of the specification is included as a carrier wave, which is non-statutory subject matter.

#### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, 15-19, and 25-30 are rejected under 35 U.S.C. 102(e) as being anticipated by US 20050086469 to Dunagan et al (hereinafter Dunagan).

Regarding claim 1, Dunagan teaches a method comprising: receiving a message at a routing node in an overlay network (Paragraph [0005], Node in the overlay network receives a message.); and generating a routing policy for another node based at least in part on content of the message (Paragraph [0005], The node generates a routing policy by looking at the ID of the intended recipient, which is contained in the message.).

Regarding claim 2, Dunagan teaches the method of claim 1, further comprising modifying the address of the message, and generating the routing policy based the modified address (Paragraph [0016], The last node in the first organization modifies the message. By modifying the message, the last node generates a routing policy by indicating that messages should be forwarded directly to it by the first node in the root organization.).

Regarding claim 3, Dunagan teaches the method of claim 1, further comprising passing the message to the application level at the routing node to process the message (Paragraph [0096], [0085-0086], The failure notification service generates routing policy involving a group ID.that is used to route failure notification messages to nodes in the failure notification group.).

Regarding claim 4, Dunagan teaches the method of claim 1, wherein generating the routing policy is at an application level in the routing node (Paragraph [0096], [0085-

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0086], The failure notification service generates routing policy involving a group ID that is used to route failure notification messages to nodes in the failure notification group.).

Regarding claim 5, Dunagan teaches the method of claim 1, further comprising returning the routing policy to a sending node (Paragraph [0016], The last node receives back a message indicating a routing policy change from its previously policy of sending subscription messages towards a root node.).

Regarding claim 6, Dunagan teaches the method of claim 1, further comprising forwarding the message to another node in the overlay network (Paragraph [0014], The subscriber node is forwarded messages from the sending node of a secondary tree. See also Fig. 2a.).

Regarding claim 15, Dunagan teaches a system comprising: a routing node receiving a message in an overlay network (Paragraph [0005], node in the overlay network receives a message.); and a message processor at the routing node (Paragraph [0056], Each computer in the multicast group is a node. Paragraph [0041], The computer has a processing unit. The "message processor" is the processing unit of each node), the message processor generating a routing policy for another node of the message based at least in part on content of the message (Paragraph [0005], The node generates a routing policy by looking at the ID of the intended recipient, which is contained in the message.).

Regarding claim 16, Dunagan teaches the system of claim 15, further comprising a routing table operatively associated with the routing node, the message processor (Paragraph [0056], Each computer in the multicast group is a node. Paragraph [0041], The computer has a processing unit. The "message processor" is the processing unit of each node) generating the routing policy based on entries in the routing table . (Paragraph [0005], Each node has a routing table, which it uses to formulate routing policy).

Regarding claim 17, Dunagan teaches the system of claim 15, wherein the routing node includes a messaging level (Paragraph [0005], The node in the overlay network receives a message.) and an application level (Paragraph [0085], The failure notification service installed on each node), the routing node generating the routing policy at the application level (Paragraph [0096], [0085-0086], The failure notification service generates routing policy involving a group ID that is used to route failure notification messages to nodes in the failure notification group.).

Regarding claim 18, Dunagan teaches the system of claim 15, wherein the routing node includes a messaging level (Paragraph [0005], The node in the overlay network receives a message.) and an application level (Paragraph [0085], The failure notification service installed on each node), the routing node returning the routing policy to a sending node at the messaging level (Paragraph [0016], The last node receives

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back a message indicating a routing policy change from its previously policy of sending subscription messages towards a root node.).

Regarding claim 19, Dunagan teaches the system of claim 19, wherein the routing node includes a messaging level (Paragraph [0005], The node in the overlay network receives a message.) and an application level (Paragraph [0085], The failure notification service installed on each node), the routing node forwarding the message to another node in the overlay network at the messaging level (Paragraph [0005], The node looks at the ID of the intended recipient, which is contained in the message, then forwards the message to the associated node.).

Regarding claim 25, Dunagan teaches a computer program product encoding a computer program for executing on a computer system a computer process, the computer process comprising: receiving a message at a routing node in an overlay network (Paragraph [0005], node in the overlay network receives a message.); and generating a routing policy for another node of the message based at least in part on content of the message (Paragraph [0005], The node generates a routing policy by looking at the ID of the intended recipient, which is contained in the message.).

Regarding claim 26, Dunagan teaches the computer program product of claim 25 wherein the computer process further comprises identifying an address to route the message (Paragraph [0005], The node looks at the ID of the intended recipient to

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identify an address.), and generating the routing policy based the address (Paragraph [0005], The node generates a routing policy by looking at the ID of the intended recipient, which is contained in the message.).

Regarding claim 27, Dunagan teaches the computer program product of claim 25 wherein the computer process further comprises passing the message to the application level at the routing node to process the message (Paragraph [0096], [0085-0086], The failure notification service generates routing policy involving a group ID that is used to route failure notification messages to nodes in the failure notification group.).

Regarding claim 28, Dunagan teaches the computer program product of claim 25 wherein the computer process further comprises generating the routing policy at an application level in the routing node (Paragraph [0096], [0085-0086], The failure notification service generates routing policy involving a group ID that is used to route failure notification messages to nodes in the failure notification group.).

Regarding claim 29, Dunagan teaches the computer program product of claim 25 wherein the computer process further comprises returning the routing policy to a sending node (Paragraph [0016], The last node receives back a message indicating a routing policy change from its previously policy of sending subscription messages towards a root node.).



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Regarding claim 30, Dunagan teaches the computer program product of claim 25 wherein the computer process further comprises forwarding the message to another node in the overlay network (Paragraph [0014], The subscriber node is forwarded messages from the sending node of a secondary tree. See also Fig. 2a.).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7-14, 20-24, and 31-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunagan in view of US 20040054807 to Harvey et al (hereinafter Harvey).

Regarding claim 7, Dunagan teaches a method comprising: identifying at least one routing policy for a message based on content of the message (Dunagan, Paragraph [0005], The node generates a routing policy by looking at the ID of the intended recipient, which is contained in the message.); and changing an address in the message (Dunagan, Paragraph [0016], When the node belonging to the root organization receives a message from the first organization the address is changed from the node belonging to the root organization to the last node in the first organization.) Dunagan does not teach but Harvey teaches to bypass at least one node

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in an overlay network based on the at least one routing policy (Harvey, paragraph [0065], Nodes in an overlay network are sorted into a linked list. When routing a message to its final destination, multiple rings are used that "skip" over various members of the sorted list of nodes.).

Therefore it would have been obvious at the time of invention to combine identifying at least one routing policy for a message based on content of the message; and changing an address in the message to bypass at least one node in an overlay network based on the at least one routing policy as taught by Harvey with the method of Dunagan in order to improve routing performance in an overlay network and to find a desired end destination node more quickly (Harvey, paragraph [0065]).

Regarding claim 8, the combination of Dunagan and Harvey teaches the method of claim 7, further comprising issuing the message directly to a destination node in the overlay network (Dunagan, Paragraph [0005], The node generates a routing policy by looking at the ID of the intended recipient, which is contained in the message, then forwarding the message to the associated node.).

Regarding claim 9, the combination of Dunagan and Harvey teaches the method of claim 7, further comprising iteratively applying a plurality of routing policies to the message, each of the plurality of routing policies modifying the address in the message (Dunagan, Paragraph [0013], The nodes of the primary tree transmit the whole message, whereas the nodes of the parallel trees transmit a digest of the message.

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Each node along the path applies its own routing policy based on the ID listed in routing tables, paragraph [0005].).

Regarding claim 10, the combination of Dunagan and Harvey teaches the method of claim 7, further comprising receiving the at least one routing policy at a sending node in the overlay network (Dunagan, Fig. 2a, Node three receives routing policy (ID contained within message, paragraph [0005].) and forwards the message to node six).

Regarding claim 11, the combination of Dunagan and Harvey teaches the method of claim 7, further comprising receiving a plurality of routing policies at a sending node from a plurality of routing nodes in the overlay network (Dunagan, Paragraph [0077], Multiple subscription messages are received by the node becoming the new root node. The subscription messages denote routing policy to the node since it must now function as a root node.).

Regarding claim 12, the combination of Dunagan and Harvey teaches the method of claim 7, wherein identifying at least one routing policy is based at least in part on the address of the message (Dunagan, Paragraph [0005], The node generates a routing policy by looking at the ID of the intended recipient, which is contained in the message.).

Regarding claim 13, the combination of Dunagan and Harvey teaches the method of claim 7, further comprising applying a transport policy to the message after changing the address in the message (Dunagan, Paragraph [0016], After the last node in the first organization modifies the message it applies a transport policy by indicating that topic messages should be forwarded directly to it by the first node in the root organization to receive the subscription message).

Regarding claim 14, the combination of Dunagan and Harvey teaches the method of claim 7, further comprising applying a transport policy to the message only after applying each identified routing policy to the message (Dunagan, Paragraph [0005], Routing policies are applied to the message along the routing path. Paragraph [0016], After the last node in the first organization modifies the message it applies a transport policy by indicating that topic messages should be forwarded directly to it by the first node in the root organization to receive the subscription message).

Regarding claim 20, Dunagan teaches a system comprising: at least one routing policy for a message (Dunagan, Paragraph [0005], The node generates a routing policy by looking at the ID of the intended recipient, which is contained in the message.); and a messaging module changing an address in the message at the sending node (Dunagan, Paragraph [0016], When the node belonging to the root organization receives a message from the first organization the address is changed from the node belonging to the root organization to the last node in the first organization.) Dunagan

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does not teach but Harvey teaches to bypass at least one node in an overlay network based on the at least one routing policy (Harvey, paragraph [0065], Nodes in an overlay network are sorted into a linked list. When routing a message to its final destination, multiple rings are used that "skip" over various members of the sorted list of nodes.).

Therefore it would have been obvious at the time of invention to combine identifying at least one routing policy for a message based on content of the message; and changing an address in the message to bypass at least one node in an overlay network based on the at least one routing policy as taught by Harvey with the system of Dunagan in order to improve routing performance in an overlay network and to find a desired end destination node more quickly (Harvey, paragraph [0065]).

Regarding claim 21, the combination of Dunagan and Harvey teaches the system of claim 20, wherein the messaging module changes the address for the message so that the message is issued directly to a destination node in the overlay network (Dunagan, Paragraph [0016], When the node belonging to the root organization receives a message from the first organization the address is changed from the node belonging to the root organization to the last node in the first organization.).

Regarding claim 22, the combination of Dunagan and Harvey teaches the system of claim 20, further comprising a policy manager (Dunagan, Fig. 2b) to identify the at least one routing policy to the messaging module based at least in part on content of the

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message (Dunagan, Paragraph [0005], The node generates a routing policy by looking at the ID of the intended recipient, which is contained in the message.).

Regarding claim 23, the combination of Dunagan and Harvey teaches the system of claim 20, wherein the at least one routing policy is generated by at least one routing node in the overlay network (Dunagan, Paragraph [0005], The node generates a routing policy by looking at the ID of the intended recipient, which is contained in the message.).

Regarding claim 24, the combination of Dunagan and Harvey teaches the system of claim 20, further comprising a transport policy identifying a transport protocol for the message based on the address in the message (Dunagan, Paragraph [0050], The event notification message embodied in a standard XML data structure, and transmitted in a User Datagram Protocol (UDP) packet or Transmission Control Protocol (TCP) stream.).

Regarding claim 31 Dunagan teaches a computer program product encoding a computer program for executing on a computer system a computer process, the computer process comprising: identifying at least one routing policy for a message based on content of the message (Dunagan, Paragraph [0005], The node generates a routing policy by looking at the ID of the intended recipient, which is contained in the message.); and changing an address in the message (Dunagan, Paragraph [0016],

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When the node belonging to the root organization receives a message from the first organization the address is changed from the node belonging to the root organization to the last node in the first organization.) Dunagan does not teach but Harvey teaches to bypass at least one node in an overlay network based on the at least one routing policy (Harvey, paragraph [0065], Nodes in an overlay network are sorted into a linked list. When routing a message to its final destination, multiple rings are used that "skip" over various members of the sorted list of nodes.).

Therefore it would have been obvious at the time of invention to combine identifying at least one routing policy for a message based on content of the message; and changing an address in the message to bypass at least one node in an overlay network based on the at least one routing policy as taught by Harvey with the method of Dunagan in order to improve routing performance in an overlay network and to find a desired end destination node more quickly (Harvey, paragraph [0065]).

Regarding claim 32, the combination of Dunagan and Harvey teaches the computer program product of claim 31 wherein the computer process further comprises issuing the message in the overlay network directly to a destination node (Dunagan, Paragraph [0005], The node generates a routing policy by looking at the ID of the intended recipient, which is contained in the message, then forwarding the message to the associated node.).

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Regarding claim 33, the combination of Dunagan and Harvey teaches the computer program product of claim 31 wherein the computer process further comprises iteratively applying a plurality of routing policies to the message, each of the plurality of routing policies changing the address in the message (Dunagan, Paragraph [0013], The nodes of the primary tree transmit the whole message, whereas the nodes of the parallel trees transmit a digest of the message. Each node along the path applies its own routing policy based on the ID listed in routing tables, paragraph [0005].).

Regarding claim 34, the combination of Dunagan and Harvey teaches the computer program product of claim 31 wherein the computer process further comprises receiving the at least one routing policy at a sending node in the overlay network (Dunagan, Fig. 2a, Node three receives routing policy (ID contained within message, paragraph [0005].) and forwards the message to node six).

Regarding claim 35, the combination of Dunagan and Harvey teaches the computer program product of claim 31 wherein the computer process further comprises receiving a plurality of routing policies at a sending node from a plurality of routing nodes in the overlay network (Dunagan, Paragraph [0077], Multiple subscription messages are received by the node becoming the new root node. The subscription messages denote routing policy to the node since it must now function as a root node.).



Regarding claim 36, the combination of Dunagan and Harvey teaches the computer program product of claim 31 wherein the computer process further comprises identifying at least one routing policy based at least in part on the address in the message (Dunagan, Paragraph [0005], The node generates a routing policy by looking at the ID of the intended recipient, which is contained in the message.).

Regarding claim 37, the combination of Dunagan and Harvey teaches the computer program product of claim 31 wherein the computer process further comprises applying a transport policy to the message after changing the address in the message (Dunagan, Paragraph [0016], After the last node in the first organization modifies the message it applies a transport policy by indicating that topic messages should be forwarded directly to it by the first node in the root organization to receive the subscription message).

Regarding claim 38, the combination of Dunagan and Harvey teaches the computer program product of claim 31 wherein the computer process further comprises applying a transport policy to the message only after applying each identified routing policy to the message (Dunagan, Paragraph [0005], Routing policies are applied to the message along the routing path. Paragraph [0016], After the last node in the first organization modifies the message it applies a transport policy by indicating that topic messages should be forwarded directly to it by the first node in the root organization to receive the subscription message).

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**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan J. Jakovac whose telephone number is (571) 270-5003. The examiner can normally be reached on Monday through Friday, 7:30 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi T. Arani can be reached on (571) 272-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RJ

  
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PRIMARY EXAMINER  
10/24/07